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ABSTRACT

This paper describes the Telematics for Teacher Training Project (T3) Work Package 08, which aims to evaluate, assess, and produce course materials to respond to the information needs of librarians supporting teacher trainers and trainees in higher education institutions across Europe. The increasing use of educational technology to deliver more flexible learning has also affected libraries, and they are in the middle of an information revolution heralded as the "electronic library." These changes demand a new approach to resourcing library staff and users, requiring a skills revolution in the training of librarians to cope with the information needs of teachers and their students. T3 Work Package 08 researched the use of telematics-based information systems in partner teacher training institutions and confirmed the role of the electronic library and its educational potential for future generations of teachers, librarians, and students. The research reveals a disparate view of educational technology throughout the European Union, where systems in use are varied both in type and application even within a particular country, and recommendations for future work must take into account variations in political, technological, and institutional training contexts. By developing universally accessible training programs for partner librarians, acquisition and transfer of the necessary telematics-based skills to their user communities is encouraged and ensured. The ultimate goal of the work package is to contribute to other European-wide programs underway to raise the profile for education of the global information society and its correlate, the electronic library. (Author/SWC)

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Training the Resourcers - Librarians, Teacher-Training and Telematics in the European Context

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ABSTRACT

This paper presents the Telematics for Teacher Training Work Package 08, whose aim is to evaluate, scope and produce course materials to respond to the information needs of librarians supporting teacher trainers and trainees in higher education institutions across Europe. The increasing use of educational technology to deliver more flexible learning has also affected libraries and we are in the middle of an information revolution heralded as the 'electronic library'. These changes demand a new approach to resourcing library staff and users, requiring a skills revolution in the training of librarians to cope with the information needs of teachers and their students. T3 Work Package 08 has researched the use of telematics-based information systems in partner teacher training institutions which has confirmed the role of the electronic library and its educational potential for future generations of teachers, librarians and students. Our research has revealed a disparate view of educational technology throughout the European Union where systems in use are varied both in type and application even within a particular country, and recommendations for future work must take into account variations in political, technological and institutional training contexts. By developing universally accessible training programmes for partner librarians acquisition and transfer of the necessary telematics-based skills to their user communities is encouraged and ensured. The ultimate goal of the work package is to contribute to other European wide programmes underway, to raise the profile for education of the global information society and its correlate, the electronic library.

1 Introduction

The increasing interest and use of telematics, defined as 'the application of information and communications technologies and services', in teacher-training across Europe is well documented. Individual case studies drawn from representative European countries chart the use of telematics to deliver teacher education at various levels since the 1980s, growing in frequency, range and distribution as the 1990s progress. National policies and technological infrastructure to facilitate and promote telematics applications and its take-up by teacher training institutions vary widely, but were given an essential boost at European Commission level by the establishment in the early 1990s of the Third Framework DELTA programme covering Telematics for Flexible and Distance Learning. The use of telematics as an efficient means of education and training dissemination in this context was confirmed by the



recommendations of the influential Bangemann report on the emergent information society in Europe, which launched the Fourth Framework Telematics Applications programme in 1994 to meet the education and training needs of one or more key user groups within which teacher educators are highlighted.

The Fourth Framework Programme also specifically acknowledges the role of librarians to act as key facilitators and a gateway into the burgeoning global arena of electronic information resources, as a natural extension of the access they have traditionally provided to print based media. Its Telematics for Libraries programme addresses the emerging needs of end users to tap into the information revolution known as the 'electronic library', whether in the public, private or academic sectors, by looking into the potential of telecommunications networks to deliver interconnected library services across Europe. It also recognises the complementary needs of librarians themselves for continuing professional development and training to keep abreast of rapidly changing resources and methods for service delivery, and thus underpins the supporting role of Fourth Framework horizontal actions: to link with each other to ensure maximum effectiveness and dissemination of research. The Telematics for Teacher Training Project encompasses the training needs of librarians supporting teacher educators and students in its Work Package 08 to develop courses for library staff, and thus recognises and reinforces the strategic role of both teachers and librarians in promoting leading edge technologies for enhanced learning and information access throughout Europe.

2 Resources

While still dominated by printed resources there is a growing development of targeted electronic resources for those involved in teacher-training, which parallels a general trend towards paperless communication in higher education institutions worldwide. With network access improving globally within private and public sector organisations alike, electronic mail is increasingly widely used amongst information hosts as a paperless alternative to more conventional delivery systems, not only for information but also as a teaching resource to learners at a distance. The educational needs of communities remote from population centres are also addressed by the use of videoconferencing technology, where face to face tuition becomes possible despite the lack of classroom contact. Of the many new electronic resources available, the most widely used is the Internet World-Wide Web (WWW) browser, with its rapidly developing capabilities for remote information dissemination. It is supplemented by global computerised bibliographic resources, including national online library collections and university catalogues, which have revolutionised book-based research. Electronic information subscription services available via database hosts and academic publishing houses offer access to other important online resources, including many thousands of electronic journals, article abstracts and literature citations. For the seven million journal articles not available in computerised versions, greater choice of fax-based delivery services guarantees fast access worldwide.

In library terms the rapid growth of Web sites on the Internet is regarded as a key area for resource development, in which the important potential to make instant connections to distant sites can be flexibly implemented as and when useful contacts



come on line. Using hypertext links in this way encourages a 'lateral thinking' approach to knowledge organisation, where a wide range of sources can be accessed according to relevance to the needs of the target group rather than to type of information provider. A glance at Internet sites of demonstrable relevance to a teacher education institution encompasses publications, computerised learning networks, media, government agencies, professional organisations, dedicated education servers, and national and overseas university departments. Parallel to the eclecticism of Web navigation national research and education networks are developing the subject tree approach to organise electronic information repositories according to more familiar library classification structures, facilitating the application of standards, evaluation measures and quality control. The networks also provide links to a wide range of other burgeoning electronic resources such as discussion list archives and gateways to public and private sector organisations, together with file transfer protocol technology to huge global databanks with interactive local access to selected sources. The vast educational potential of the Internet has resulted in a growing need for many training initiatives worldwide for teachers, librarians and end users as students or academic staff on the general principles of Internet information retrieval.

3 Implications

The Telematics for Teacher Training Project (T3) aims to encourage over four thousand teachers at all levels throughout Europe to integrate educational technology systems and resources into their methodology, course development, curricula and teaching applications. To maximise access to and dissemination of new technologies within its teacher education constituency, T3 looks to librarians and information professionals as partners with established expertise in information handling, search and retrieval skills, evaluation criteria and knowledge organisation. In its Work Package 08, Courses for library staff, T3 sets out to identify the professional development needs of 'library staff and their access to Telematics in the majority of European countries' in their support of teacher trainers. A picture has been developed of the current state of technology and resource access to librarians within partner institutions via a questionnaire survey. Responses to questions on current electronic resources, access, availability and usage levels highlighted current policies and practices in teacher education across Europe, revealed partners' own experiences within their country context, and identified trends and attitudes with potential influence. Comments by external reviewers in the United Kingdom and other parts of the European Community confirmed the relevance of the information for course design towards the professional development of European librarians.

Survey findings devolved into three specific areas, addressing in turn the complex mix of political, technological and training issues influencing the position of the partner's library and staff within their institution. Politically in European Community countries, the central government philosophy underlying the use of educational technology in the national department responsible for teacher education development is an essential component when considering ways forward. Amongst the countries investigated, the role of central government involvement varies: strong positive support springing from a case already made (Eire, Finland), a more passive encouragement of institutional level initiatives (the Netherlands, Portugal), educational studies funded under national research rather than academic institutions



(Italy), and a transitional regional framework for teacher training (France). Where a two tier system of primary and secondary level teacher education exists (Italy, Portugal) this can act as a further barrier.

The variation in implementation of technological infrastructure amongst partner countries and institutions must also be taken into account when evaluating options for library course development. Where a potential delivery framework is actively evolving or in place (Finland, Eire, the Netherlands, Portugal), access routes such as electronic mail and the WorldWideWeb present options familiar to many library staff and users who will have already acquired a basic skills level in their management. Where available within the partner institutions electronic library guides and WorldWideWeb pages offer further options for links with external services. Videoconferencing via ISDN links within the partner library is not yet widely available (except in Finland) although access can be provided elsewhere in the institution (Portugal). General integration of information technology into the curriculum gives a key insight into its perceived importance within the teaching strategy of the institution. It is important to note that even though technology may be available does not necessarily mean that it will be used, for a number of institutional and individual reasons.

Training initiatives amongst the partners vary widely in frequency for academic as well as library staff and students, and also differ in level between foundation skills at induction and more advanced training for updating and professional development. Within the partner libraries in Eire and Finland training sessions at both levels are offered at least once a week, in Portugal once a month, in France and Italy occasionally, whilst in the Netherlands they are devolved to academic departments. The frequency gives some indication as to how important the individual institution considers training in electronic sources and systems to be for staff and students. Induction level training is widely available, but continuing training programmes are more revealing in the priority they assign to integration of systems awareness into learning and staff development. The location of training initiatives and differential levels of resourcing between library, computing unit and academic departments are also indicative of the teaching profile and credibility attained by the library within the institution.

These T3 findings inform related European research currently underway in the Telematics for Libraries sector of the Telematics Applications Programme, and also overlap most usefully with individual countries' training initiatives such as the Electronic Libraries Programme in the United Kingdom. The influential 1993 Follett and Fielden reports on the future of the information profession in academic libraries specifically addressed the training needs of library staff and users, recommending development of materials and programmes to stimulate use of information resources and services. Central government responded with the present Electronic Libraries Programme to widen and extend information access for academic library staff and users. The programme funds over sixty interrelated projects covering diverse aspects of electronic publications, catalogues and bibliographic resources, staff and user training, and changing patterns of information technology and resource use.



4 Conclusions

Design and production of relevant courses for European library staff must look not only at what is possible but what is practicable within their own country and institutional context. Recommendations arising from T3 Work Package 08 suggest improvements in communication between partner library staff and academic staff and users, to ensure course design is based on acknowledged needs that includes most relevant content. Detailed surveys of users by library staff in the individual teacher education institutions, and reviews of available training materials in information technology skills and education for librarians and the academic community, are also recommended. The report calls for closer liaison with other sectors of the library profession in partner countries in Europe, existing library training programmes, professional organisations, electronic information initiatives and other relevant research in the European Community.

Now in its early stages of active development, the WorldWideWeb based course arising from T3 Work Package 08 presents to librarians a case study in resource training in a targeted subject area. It builds a framework for future generations of teachers to disseminate electronic library skills for the wider benefit of their own students and also serves as a blueprint for parallel electronic library developments in the European Union.

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Veen, W., Collis, B., De Vries, P., and Vogelgang, eds., Telematics in education: the European case (Academic Book Centre, De Lier), 1994.

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Telematics for Libraries (http://www2.echo.lu/en/libraries/)

EDUCATE (http://educate.lib.chalmers.se/)

CTILIS (http://info.lut.ac.uk/department/dils/cti/

ITTI (http://www.icbl.hw.ac.uk/itti/)

The Electronic Libraries Programme (eLIB)(http://ukoln.bath.ac.uk/elib/)

NetLinks (http://www.shef.ac.uk/~np/)

NetSkills (http://www.netskills.ac.uk/)

EduLib (http://www.hull.ac.uk/Hull/CTLS Web/edulib/)

CERLIM (http://www.uclan.ac.uk/research/centre/cerlim/)

LISTEN (http://info.lboro.ac.uk/departments/dils/cti/)



TLTP (http://www.icbl.hw.ac.uk/tltp/)
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